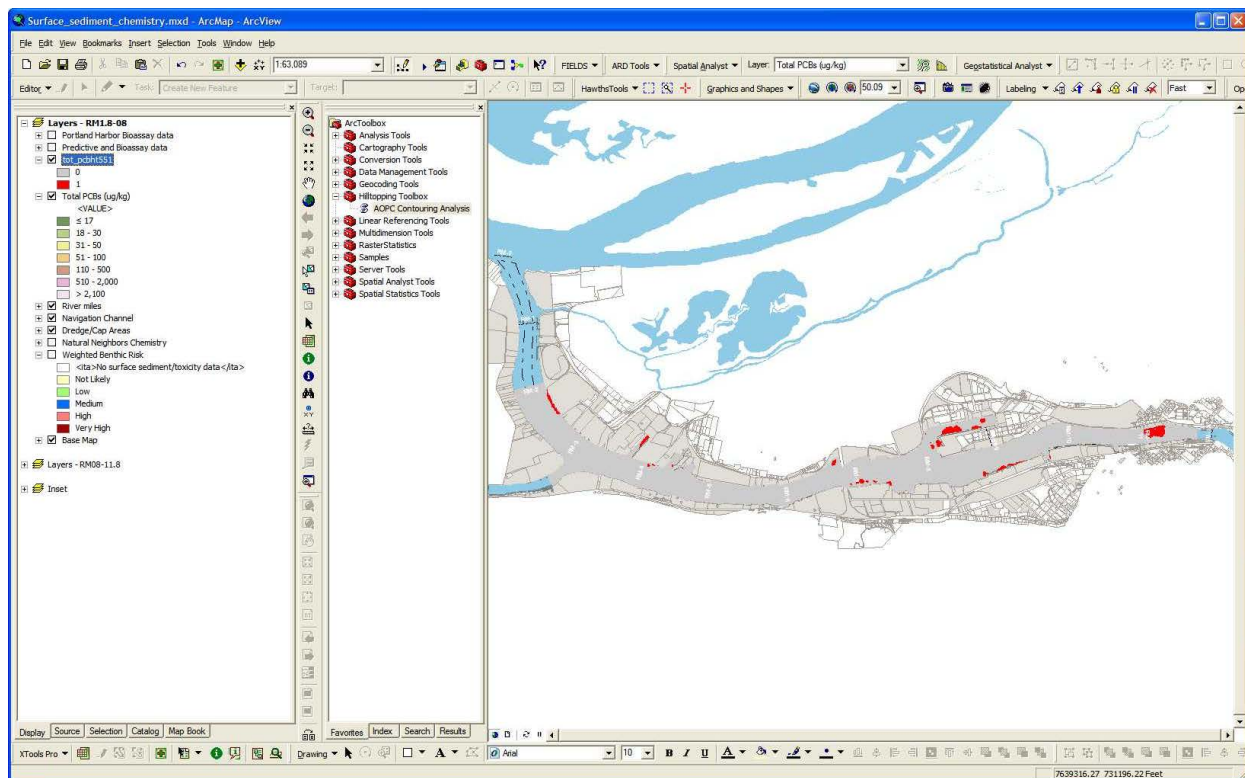


From: Benjamin Shorr
To: Carrie A. Smith
Cc: Margaret Spence, Duminiak, Michael, Eric Blischke/R10USFPA/USFPA
Subject: Re: PRGs for Mapping AOPCs
Date: 04/17/2009 09:15 AM

Hilltopping areas example (Total PCBs 551 threshold; PRG = 60; replacement 17)



Carrie A. Smith wrote:

Holy Cow. You guys were busy yesterday. Sounds like I should stay tuned and wait before installing the files Ben sent earlier? There are still some issues unresolved, right?

From: Benjamin Shorr [mailto:Benjamin.Shorr@noaa.gov]
Sent: Thursday, April 16, 2009 9:45 AM
To: Margaret Spence
Cc: Duminiak, Michael; Carrie A. Smith
Subject: Re: PRGs for Mapping AOPCs

Sorry for the profusion of emails-
I'm working on the sub-area piece- not getting quite right hilltopped grid.

Margaret Spence wrote:

My reason for asking is whether this version should be created/maintained as a separate tool from the enhanced version we need to send out to the rest of the group. To assist the EPA folks up here, I'll need to be able to run that version as well.

From: Benjamin Shorr [mailto:Benjamin.Shorr@noaa.gov]
Sent: Thursday, April 16, 2009 8:42 AM
To: Margaret Spence
Cc: Duminiak, Michael; Carrie A. Smith; Eric Blischke
Subject: Re: PRGs for Mapping AOPCs

Internally for now.

Margaret Spence wrote:

Sure. Quick question, though. Do you anticipate this version of the tool being distributed to the entire group or just used "internally" for our retreat prep?

From: Benjamin Shorr [mailto:Benjamin.Shorr@noaa.gov]
Sent: Thursday, April 16, 2009 8:31 AM
To: Duminiak, Michael
Cc: Margaret Spence; Carrie A. Smith; Eric Blischke
Subject: Re: PRGs for Mapping AOPCs

Mike and Margaret-

For testing- here is a revised script that creates boolean grids for the PRG level and for the hilltopped scenario. I have set up these grids to be named with the original grid name + procedure (ht or bg) + threshold or prg value. They are created in the source raster folder by default (easiest for now). There shouldn't be an overwrite problem if the PRG's are different- each name should be unique.

The intention is that these grids can be more easily combined into areas than the contours.

Mike and Margaret- could you please take a look at this and provide comments/suggestions?

Thanks!
Ben

Duminiak, Michael wrote:

Being on a different time, I feel like I was playing catch-up on all those emails. I did have the same problem, but like Ben I hadn't originally been trying that approach and hadn't noticed it. The files will just have to be moved manually for the time being I suppose.

Mike

From: Margaret Spence [mailto:MSpence@parametrix.com]
Sent: Wednesday, April 15, 2009 7:16 PM
To: Benjamin Shorr
Cc: Duminiak, Michael; Carrie A. Smith
Subject: RE: PRGs for Mapping AOPCs

Here's a revised set of instructions using Ben's enhanced GIS Tool. Except for the new screen shots, all revisions are in Track Changes, so you can see what was revised. Let me know if you have any questions, corrections, or revisions.

Mike, have you had a chance to work with Ben's new script and toolbox? Have you encountered the file overwrite problem when you run the tool multiple times for the same chemical and PRG (and sub-area and workspace)?

I'll be in the office all day tomorrow (although I also have three meetings scheduled so far). I'll start thinking about file naming and storage when I get back in tomorrow morning.

Margaret

From: Benjamin Shorr [mailto:Benjamin.Shorr@noaa.gov]
Sent: Wednesday, April 15, 2009 11:26 AM
To: Margaret Spence
Cc: Duminiak, Michael; Carrie A. Smith

Subject: Re: PRGs for Mapping AOPCs

Margaret- I'm not sure how that works...

Attached is an updated script and toolbox with a workspace so the shapefiles are all written to the same folder that is user specified. Not perfect, but may help with organization.

I added a workspace parameter to the toolbox and incorporated the raster base name into the shapefile contour name. Note that python is case sensitive and WYSIWYG (the conditional statements are based on tabs and carriage returns)...

Margaret Spence wrote:

I think I cured the PRG shapefile overwrite issue. It's quite subtle (at least to me). All I did was remove the space after each comma in the following command.

```
gp.ContourList_sa(strUsedRaster, strFileContourSpecific, strPRG)
```

It appears the space before strFileContourSpecific was causing the problem. This space wasn't included in the command to create the background contour shapefile (which is why it didn't have an overwrite problem). The space before atrPRG doesn't appear to matter (perhaps since it's read as a number by the command), but I took it out anyway.

Unfortunately, this fix doesn't appear to do the trick for the hilltop contour shapefile. I'll keep experimenting awhile longer, but we may just have to continue to instruct the users to run each specific analysis (chemical/PRG/background) once and only once.

Margaret

From: Benjamin Shorr [mailto:Benjamin.Shorr@noaa.gov]

Sent: Wednesday, April 15, 2009 10:16 AM

To: Margaret Spence

Cc: Duminiak, Michael; Carrie A. Smith

Subject: Re: PRGs for Mapping AOPCs

that's my thought exactly. I'm working on the code right now.

Margaret Spence wrote:

Good thoughts, Ben.

I'm experimenting with the tool's script to address the overwrite issue, but no luck yet. What's weird is, I'm observing that the clipped raster and background concentration contour shapefile overwrite, but the PRG contour shapefile and hilltopping shapefiles don't. So, in its current form, the tool will generate overwrite errors when you run the same chemical/PRG area-wide analysis for different background concentrations (it dies trying to create the initial PRG contour shapefile).

Here's an initial thought regarding the use of rasters instead of hilltop contours. If we can create a binary grid for each chemical, then we can add them together (either all or by chemical group) to identify areas with the most chemicals to be cleaned up.

Margaret

-----Original Message-----

From: Benjamin Shorr [mailto:Benjamin.Shorr@noaa.gov]

Sent: Wednesday, April 15, 2009 9:56 AM

To: Margaret Spence

Cc: Duminiak, Michael; Carrie A. Smith

Subject: Re: PRGs for Mapping AOPCs

Folks-

As you begin running through these numbers, do we have a common naming convention? I'm concerned that what we really should be outputting from this tool is a grid with cells coded 1 or 0 for remove (to achieve hilltopping) vs. don't remove.

I recommend that you both run through 1 or 2 contaminants, think about how these can be combined and send around some thoughts, then we chat- either later today or tomorrow morning.

A couple of other things to consider-

1. If we're using the "background" in these tables as replacement values, make sure the units of the "background" match the interpolated grid. Also match the PRG units.
2. The script can operate in batch mode- however in it's current iteration that may be an overwrite nightmare. I'm working on the workspace issue...

Ben

Margaret Spence wrote:

I'm OK as published. I didn't intend a tone in my message to imply otherwise...

-----Original Message-----

From: Duminiak, Michael [mailto:DuminiakM@noaa.gov]

Sent: Wednesday, April 15, 2009 9:01 AM

To: Margaret Spence; Carrie A. Smith; Benjamin Shorr

Subject: RE: PRGs for Mapping AOPCs

If you would prefer to switch, I don't care. I just figured we'd already published it that way. It's all the same to me.

-----Original Message-----

From: Margaret Spence [mailto:MSpence@harscoetrix.com]

Sent: Wednesday, April 15, 2009 12:00 PM

To: Duminiak, Michael; Carrie A. Smith; Benjamin Shorr

Subject: RE: PRGs for Mapping AOPCs

I guess I'll take the Eco then...

-----Original Message-----

From: Duminiak, Michael [mailto:DuminiakM@noaa.gov]

Sent: Wednesday, April 15, 2009 8:59 AM

To: Carrie A. Smith; Margaret Spence; Benjamin Shorr

Subject: RE: PRGs for Mapping AOPCs

I will get started on the human health since that was my original assignment.

Mike

-----Original Message-----

From: Carrie A. Smith [mailto:CSmith@harscoetrix.com]

Sent: Wednesday, April 15, 2009 11:58 AM

To: Margaret Spence; Duminiak, Michael; Benjamin Shorr

Subject: FW: PRGs for Mapping AOPCs

All,

This seems like it is enough to get us started.

Mike and Margaret - if you have some time over the next couple of days, perhaps one of you could tackle getting going on human health and the other on eco? That leaves Ben continuing his work on refining the tool and we out for most of the day today and all day tomorrow. I can jump back in on Friday to help out.

How does that sound?

Carrie

-----Original Message-----

From: Blischke.Eric@epamail.epa.gov

Sent: Tuesday, April 14, 2009 5:33 PM

To: BurtShephard@epamail.epa.gov; Benjamin Shorr;

anderson_james@state.or.us; adam@harscoetrix.com; Carrie A. Smith;

jmg@harscoetrix.com; Locke, Adam;

shibata.matt@epamail.epa.gov; kech@harscoetrix.com; Carrie.A.Smith@epamail.epa.gov;

Locke.Fratis@epamail.epa.gov; JRTT.Stevens@eq.state.or.us;

duminiak@noaa.gov

Cc: Shephard.Burt@epamail.epa.gov

Subject: FW: PRGs for Mapping AOPCs

Here is what I have from the human health team. See my list below for a first cut at ecological PRGs for mapping. For ecological risk, we can get started on mapping metals (PECs) and PAHs (PEC and P.3 mg/kg). PECs may be found on the attached SQuRT table. I will work with Burt to come up with more specificity on the PCBs, pesticides and PCDF (i.e., which receptors to map and whether to map low or high bioaccumulation or both)

Eric(See attached file: 122_NEW-SQuRTs Nov 2008.pdf)

----- Forwarded by Eric Blischke/R10/USEPA/US on 04/14/2009 05:25 PM -----

Dana

Dayvoli/R10/USEPA

/US

04/14/2009 05:11

PM

Eric Blischke/R10/USEPA/US&EPA To

cc

Burt Shephard/R10/USEPA/US&EPA,

Chip Humphrey/R10/USEPA/US&EPA,

jmg@harscoetrix.com,

anderson_james@state.or.us,

jayville@harscoetrix.com Subject

Re: PRGs for Mapping AOPCs

(Document link: Eric Blischke)

Attached are the draft EXCEL files that identify our PRGs to be mapped. We had pretty much done this before your e-mail came. We have not included the PRGs for direct contact for all chemicals. Mike and I can talk with you tomorrow between 8:15 to 9:00 AM to explain how the 3 of us (we, Mike, and Jim) came up with these PRGs. We can change them during our conversation if you want us to. We think that we need PRGs for large home range species, bees, clams and crayfish because all 4 of these will be done differently for the hilltopping.

(See attached file: 20090414 5pm Draft PRGs to be mapped.xls)

Eric

Blischke/R10/USE

PA/US

To

04/14/2009 02:44
PM

Dana Devoli/R10/USEPA/USSEPA,
Burt Shephard/R10/USEPA/USSEPA
benjamin.shorr@noaa.gov, Chip
Humphrey/R10/USEPA/USSEPA
Subject: PRGs for Mapping AOPCs

We had a GIS meeting this morning. I would like to get the GIS folks mapping out PRGs as soon as we can in order to be able to present information at the upcoming data retreat. I am not sure where you two are on this but here is what I feel we should be using as PRGs

Ecological Risk:

Metals - Use PECs. Map on site wide and river mile basis (near shore only).
PAHs - Use LMW PRG (9.3 mg/kg assuming 24 OC) and PEC (22.8 mg/kg). Map on site-wide and river mile (near shore basis) PCBs - pick a range (e.g., mink, eagle, river otter, sculpin, and bass) that extends from 10 -2 to 1 ppm. Map on site-wide and river mile basis (near shore and bank to bank). Pesticides - use the LMW provided PRG for Aldrin. For DDT, use the PRG for sculpin and clams or sandpiper. Map on site-wide and river mile basis (near shore only) Map 2,3,4,7,8-PCDF for mink. Map on site-wide and river mile basis (near shore only).

We will also be looking at empirical bioassays. Jay Field has developed a GIS layer for the bioassay results relative to the reference envelope. Ben Shorr has developed layers similar to what was done for the data gaps analysis in 2007 but using the Round 3 data. We will be able to turn these layers on and off when mapping and evaluating other PRGs.

Human Health Risk:

We need to avoid PRGs that are below background.

Direct Contact:

Map PAHs for workers and high frequency or tribal fishers (10-6 and 10-4 risk level). Map on site-wide and river mile basis (near shore only). Map PCBs for high frequency or tribal fishers (10-6 and 10-4 risk level). Map on site-wide and river mile basis (near shore only).

Fish Consumption:

Map total PCBs - large home range fish (142 g/day), bass (17.5 g/day) - 10-4 risk level. Map large home range fish site wide and bass on river mile basis (near shore and bank to bank). Map key pesticides (Aldrin, Dieldrin, DDT, either gamma or beta HCH, HCB and chlordane) at risk levels and fish species that range from background levels to 1000x background. Map large home range fish site wide and bass on river mile basis (near shore and bank to bank). Map 2,3,4,7,8-PCDF at the appropriate risk range and fish species. Map large home range fish site wide and bass on river mile basis (near shore and bank to bank).

Please provide me with your input on this. I would like to get something out to the GIS team today. It is critical that they begin the mapping exercise to get ready for the retreat.

Thanks, Eric

--
Benjamin Shorr | Physical Scientist
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